

AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended)

1. ~~A synthetic enzyme for the production of coniferyl alcohol, coniferylaldehyde, ferulic acid, vanillin and vanillic acid from eugenol~~ An isolated ferulic acid deacylase comprising amino acid sequence SEQ ID NO. 30.

Claim 2 (currently amended)

2. ~~A synthetic enzyme according to claim 1 selected from the group comprising: a) eugenol hydroxylase, b) coniferyl alcohol dehydrogenase, c) coniferylaldehyde dehydrogenase, d) ferulic acid deacylase and e) vanillin dehydrogenase~~ The isolated ferulic acid deacylase of claim 1, wherein the isolated ferulic acid deacylase is part of a 9400 bp EcoRI-fragment of *Pseudomonas* sp. HR 199 (DSM 7063).

Claim 3 (currently amended)

3. ~~An isolated DNA coding for the enzyme according to claim 1 as well as partial sequences and functional equivalents thereof.~~

Claim 4 (currently amended)

4. ~~Cosmid A cosmid clone containing the~~ comprising an isolated DNA according to claim 3.

Claim 5 (currently amended)

5. ~~Vector containing the~~ A vector containing an isolated DNA according to claim 3.

Claim 6 (currently amended)

6. ~~Microorganism~~ A microorganism transformed with the isolated DNA according to claim 3.

Claim 7 (currently amended)

7. ~~A method of transforming a microorganism comprising inserting DNA, partial sequences of DNA or functional equivalents thereof which code for an enzyme selected from the group consisting of eugenol hydroxylase, coniferyl alcohol dehydrogenase, coniferylaldehyde dehydrogenase, ferulic acid deacylase and vanillin dehydrogenase~~ A process of converting ferulic acid to vanillin comprising subjecting ferulic acid to the ferulic acid deacylase of claim 1 for a period of time sufficient to convert the ferulic acid to vanillin and recovering the vanillin thus formed.

Claim 8 (currently amended)

8. A method of producing ~~coniferyl alcohol, coniferylaldehyde, ferulic acid, vanillin and vanillic acid~~ comprising ~~subjecting eugenol to one or more of the microorganisms of claim 6 comprising the steps of:~~
- (1) providing a microorganism of claim 6 and expressing a ferulic acid dehydrogenase of claim 1;
 - (2) providing ferulic acid to said microorganism; and
 - (3) converting the ferulic acid to vanillin by subjecting ferulic acid to the ferulic acid deacylase for a period of time sufficient to convert the ferulic acid to vanillin and recovering the vanillin thus formed.

Claim 9 (currently amended)

9. ~~A process for the production of coniferyl alcohol from eugenol, wherein the reaction is carried out in the presence of eugenol hydroxylase~~ An isolated DNA coding for the enzyme according to claim 2 comprising SEQ ID NO. 29.

Claim 10 (currently amended)

10. ~~A process for the production of coniferylaldehyde from coniferyl alcohol, wherein the reaction is carried out in the presence of coniferyl alcohol dehydrogenase~~ A cosmid clone comprising an isolated DNA according to claim 9.

Claim 11 (currently amended)

11. ~~A process for the production of ferulic acid from coniferylaldehyde, wherein the reaction is carried out in the presence of coniferylaldehyde dehydrogenase~~ A vector containing an isolated DNA according to claim 9.

Claim 12 (currently amended)

12. ~~A process for the production of vanillin from ferulic acid, wherein the reaction is carried out in the presence of ferulic acid deacylase~~ A microorganism transformed with the isolated DNA according to claim 9.

Claim 13 (currently amended)

13. ~~A process for the production of vanillic acid from vanillin, wherein the reaction is carried out in the presence of vanillin dehydrogenase~~ The process of claim 7, wherein the ferulic acid deacylase

comprises amino acid sequence SEQ ID NO. 30 and is part of a 9400 bp EcoRI-fragment of *Pseudomonas* sp. HR 199 (DSM 7063).

Claim 14 (new)

14. The method of producing vanillin of claim 8, wherein said microorganism is transformed with an isolated DNA comprising SEQ ID NO. 29 which codes for an isolated ferulic acid deacylase comprising amino acid sequence SEQ ID NO. 30 and is part of a 9400 bp EcoRI-fragment of *Pseudomonas* sp. HR 199 (DSM 7063).

Claim 15 (new)

15. An isolated DNA coding for the enzyme according to claim 1 comprising SEQ ID NO. 29.